Stanford Linear Accelerator Center (SLAC)

Site Description: SLAC, located at the edge of Silicon Valley in California, is about halfway between San Francisco and San Jose. The site is on 426 acres of Stanford University land leased to the U.S. Department of Energy (DOE). Established in 1962, SLAC operates the world's longest and most powerful linear accelerator (LINAC), the B-Factory Project (PEP II Rings and BaBar Detector), and the Stanford Positron Electron Accelerating Ring (SPEAR). The site has over 350 buildings and facilities.

Mission: SLAC's mission is experimental and theoretical research in elementary particle physics using electron beams, as well as a broad program of research in atomic and solid state physics, chemistry, biology, environmental science, and medicine using synchrotron radiation.

Management: The lead program secretarial office is the Office of Science (SC). Major funding and direction are provided by the Offices of High Energy Physics (SC-22), Basic Energy Science (SC-10), and Biological and Environmental Research (SC-70). The DOE Stanford Site Office (SSO), as part of the Oakland Operations Office (OAK), manages SLAC's contract activities. SLAC's management and operation contractor is Stanford University. A new five-year performance based contract was signed on December 18, 1998, effective through December 30, 2003. The staff of about 1350 includes 250 Ph.D. scientists. Typically 1200 physicists from universities and laboratories around the world participate in the high-energy physics program, and 1500 scientists from universities and industrial laboratories are active in the synchrotron radiation program. The SSO employs approximately seven DOE personnel at SLAC.

Budget: The annual budget for FY1999 and FY2000 is approximately $180 million, each year.

Integrated Safety Management (ISM) Implementation Status: The ISM Phase I verification, to define the scope of the site's ISM system and implementation procedures, was completed on August 28, 1998. The OAK Manager approved SLAC's ISM description on March 19, 1999. The report from Phase II verification was completed October 15, 1999. Additional information can be accessed through the Internet at http://www.slac.stanford.edu/esh/isms/phaseii.html.

Significant Events: There have been no significant events reported for the past two years.

Key Facilities

Facility Name	Mission /Status	Principal Hazards
Linear Accelerator (LINAC)	Linear electron accelerator - 50 GeV /Operating	Electrical, slips/trips/falls,
B-Factory Project (PEP II/BaBar detector)	Electron-positron collisions -9/3 GeV /Operating	Electrical, slips/trips/falls,
Stanford Positron Electron Accelerating Ring (SPEAR)	Storage ring for synchrotron radiation research, electron-positron collisions -3 GeV /Operating	Electrical, slips/trips/falls,

SLAC has been classified as a low hazard facility. Radiological hazards can exist in some areas in the accelerator housing during maintenance periods when the accelerators are not operating. Three additional facilities, which are not considered key facilities, are of note, from a safety perspective. The first is the Central Hazardous Waste Management Area (Building 447) which accumulates, stores (up to 90 days), and ships sitewide hazardous waste. The second is the Plating Shop, which performs plating of accelerator internal parts and poses hazards associated with exposure to hazardous chemicals, such as acids. The third is the Positron Vault, which creates positrons for research and poses a radiological hazard during periods of maintenance.

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